

place the claim and its dependent claims in condition for allowance. The absence of prior art disclosing a capillary array (claim 10) or a fiber array (claim 59) was also discussed. Finally, the Examiner agreed to reconsider the rejections with respect to all pending claims. Applicants appreciate the Examiner's offer to telephone them to discuss any minor claim amendments that may be deemed necessary upon review of the foregoing amendments.

Claim Rejections – 35 USC §102

Claims 1, 15-24, and 28 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,280,618 to Watkins et al. Applicants assume the rejection was intended to be under 35 U.S.C. 102(e), because Watkins et al. issued 8/28/01, after the filing date of the present application, 10/13/00.

Claim 1 has been canceled. Its dependent claims have either been canceled (20-28) or been amended to depend from independent claim 6 (15-19).

Claim Rejections – 35 USC §103

Claims 1-63 were rejected under 35 U.S.C. 103(a) as being unpatentable over Watkins et al. in view of Michael et al., "Randomly Ordered Addressable High-Density Optical Sensor Arrays," *Anal. Chem.* 1998, 70, 1242-1248. The Examiner grouped claims 6, 9, 10, 12, 25-27, 36, 41, 42, 46, 53, 54, 56, 57, and 59 into four categories and then addressed the rejections of each of these categories. The categories are as follows:

- 1) any particular number of extraction probes (claims 12, 25-27, 41, 42, 53, 56, and 57)
- 2) combinatorially-derived extraction phases (claims 6, 36, and 46)
- 3) position-addressable arrays (claims 10 and 59)
- 4) encoded extraction probes (claims 9 and 54)

Although the Examiner stated that all claims 1-63 were rejected, the Examiner did not address or discuss the following claims: 2-5, 7, 8, 11, 13, 14, 29-35, 37-40, 43-45, 47-52, 55, 58, and 60-63.

Applicants address these points as follows:

1) Any particular number of extraction probes

Independent claims 12 and 53 recite particular numbers of extraction probes. Claim 12 has been amended to incorporate the limitations of dependent claim 46 and is discussed below with reference to combinatorially-derived extraction phases. Claim 53 and its dependent claims 54-58 have been canceled. Of the additional claims cited by the Examiner as reciting particular numbers of extraction probes, claims 25-27 have been canceled, and claims 41 and 42 depend from claim 6, which is discussed below.

2) Combinatorially-derived extraction phases

Independent claim 6 has been amended to recite a method using extraction probes, each having "a combinatorially-derived extraction phase that differs from the extraction phase of at least one other of [the] extraction probes." Independent claim 12 has been amended to incorporate the limitation of claim 46 and now recites an assembly of extraction probes having different types of "combinatorially-derived extraction phase[s]." As amended, claim 6 is a method of use of the assembly of amended claim 12.

The Examiner asserts that "[w]ith respect to using combinatorially-derived extraction phases, position addressable arrays and encoded extraction probes, Michael et al. teach such." The only evidence the Examiner provides for combinatorially-derived extraction phases is that the sensors of Michael et al. have "different reactive chemistries [that] allow for a 'large, diverse sensor library.'" Such a large sensor library has no relationship to combinatorially-derived extraction phases. The distinction between multiplexed analysis and combinatorial analysis is recognized in the art and specifically discussed in the present application, e.g., on p. 37, line 27 – p. 38, line 4:

Such combinatorial SPME is distinct from multiplexed SPME. Multiplexed SPME refers to a number of SPME measurements that are carried out in parallel. Combinatorial SPME, in contrast, refers to an empirical approach to synthesis that emphasizes generation of a large number of random or semi-random structures in hopes of finding one or more with desired properties. Often, combinatorial syntheses are multiplexed in the sense that they are often carried out simultaneously in the same sample. For example, immunoassays in which multiple immunoassays are carried out simultaneously in the same sample volume are multiplexed, but are not combinatorial

because they target a well-defined set of molecules.

There is no mention of such an approach to synthesis of sensing chemistries in Michael et al. Likewise, Watkins et al. does not disclose or teach the use of combinatorially-derived reagents on the microparticles. Because not all of the claim elements are taught or suggested by the
5 prior art, a *prima facie* case of obviousness cannot be made. Applicants respectfully request withdrawal of the rejections to independent claim 6 and its dependent claims 2-5, 7, 8, 15-19, 29-43 and independent claim 12 and its dependent claims 13, 14, 46, 47, and 49-52.

10 3) Position-addressable arrays

Claim 10, amended to correct a minor formal error, recites a method containing the steps of "providing a position-addressable array of extraction probes," "providing an array of capillaries addressable by the array of extraction probes," and "contacting the array of extraction probes with the array of capillaries such that the extraction probes are positioned
15 within the capillaries." Claim 59 recites a method containing "providing a position-addressable array of extraction probes, each comprising a fiber and an extraction phase."

The Examiner asserts that Michael et al. "suggests position addressable arrays where the identity of the microspheres is determined by its location in the array, although such is not
20 preferred." Applicants respectfully disagree with the Examiner's summary of the teachings of Michael et al. Position-addressable arrays of microspheres are not disclosed or suggested in Michael et al., not even as a non-preferred embodiment of the method of Michael et al. Rather, Michael et al. discusses only prior art position-addressable arrays "in which the sensing chemistries are applied directly to the sensor surface" (p. 1242; emphasis added). The
25 position-addressable arrays of claims 10 and 59, however, are arrays of extraction probes, each comprising an extraction phase, and not arrays in which the extraction phases are applied to a single surface. Accordingly, the Examiner's proposed combination of the teachings of Michael et al. with those of Watkins et al., which also fails to teach position-addressable arrays, is also unavailing.

30 Furthermore, Michael et al. does not teach an array of capillaries addressable by an array of extraction probes or contacting this array of capillaries with the extraction probes such that the

extraction probes are positioned within the capillaries, as recited in claim 10. Michael et al. also does not teach an array of fibers, as recited in claim 59. Indeed, none of the prior art of record teaches these claim limitations.

- 5 Because not all of the claim limitations are taught or suggested by the prior art, a *prima facie* case of obviousness cannot be established. Applicants therefore respectfully request withdrawal of the rejections of claims 10, 11, and 59-63.

4) Encoded extraction probes

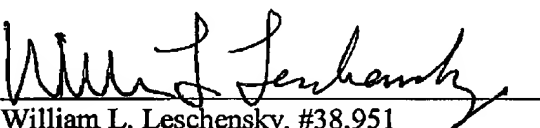
- 10 Claims 9 and 54 have been canceled.

Applicants believe that all claims are now in condition for allowance, which action they respectfully request.

- 15 This constitutes a request for any needed extension of time and an authorization to charge all fees therefor to deposit account No. 501654, if not otherwise specifically requested. The undersigned hereby authorizes the charge of any fees created by the filing of this document or any deficiency of fees submitted herewith to be charged to deposit account No. 501654.

20 Respectfully submitted,

25 Date: January 29, 2003



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Marked-up version of the claim amendments:

6. (twice amended) A method for extracting a plurality of analytes from a sample, comprising the steps of:
providing a plurality of extraction probes capable of adsorbing analytes, wherein each extraction probe comprises a solid support and a combinatorially-derived extraction phase that differs from the extraction phase of at least one other of said extraction probes;
contacting said extraction probes with a sample suspected of comprising at least one of the analytes; and
separating said extraction probes from the sample.
10. (twice amended) A method for extracting a plurality of analytes from a sample, comprising the steps of:
providing a position-addressable array of extraction probes, each probe comprising a solid support and an extraction phase;
providing an array of capillaries addressable by the array of extraction probes, the capillaries containing aliquots of the sample;
contacting the array of extraction probes with the array of [capillary tubes] capillaries such that the extraction probes are positioned within the [capillary tubes] capillaries;
separating the array of extraction probes from the array of capillaries, such as that the extraction probes are separated from the sample.
12. (twice amended) An assembly [comprising at least 100 differentiable] of extraction probes, each extraction probe comprising a solid support and [an] a combinatorially-derived extraction phase, wherein said extraction probes comprise a plurality of different types of extraction phases.

15. (amended) The method of claim [1] 6 wherein said extraction probes are differentiable, and wherein the method further comprises distinguishing between at least two different separated extraction probes.